

CLAIMS

We claim:

1. An apparatus for sealing food containers using a sealing film, the apparatus comprising:
 - a base;
 - a container holder for holding a food container, the container holder is configured to be moved relative to the base between a loading position and a sealing position;
 - a heater platen positioned within the base;
 - a handle rotatably attached to the base to rotate between a loading position and a sealing position, the handle having a cam within the base; and
 - a pressure applicator positioned between a portion of the cam and a surface of the heater platen whereby, as the handle is rotated, the cam rotates and presses against the pressure applicator, which, in turn, applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container when the container holder is in the sealing position.
2. An apparatus for sealing food containers using a sealing film, the apparatus comprising:
 - a base;
 - a container holder for holding a food container, the container holder is configured to hold a roll of the sealing film such that a portion of the sealing film may be unrolled and pulled over the food container;
 - a heater platen positioned within the base; and
 - a pressure applicator positioned on a surface of the heater platen wherein the pressure applicator applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container.
3. An apparatus for sealing food containers using a sealing film, the apparatus comprising:
 - a base;
 - a container holder for holding a food container;
 - a heater platen positioned within the base;

a pressure applicator positioned on a surface of the heater platen, wherein the pressure applicator applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container; and

a cutting blade mounted in front of the heater platen for cutting the sealing film.

4. An apparatus for sealing food containers using a sealing film, the apparatus comprising:

a base;

a container holder for holding a food container, the container holder is configured to be moved relative to the base between a loading position and a sealing position;

a heater platen positioned within the base;

a pressure applicator positioned on the heater platen wherein the pressure applicator applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container when the container holder is in the sealing position, wherein the pressure applicator includes a resilient member for applying resilient pressure to the heater platen.

5. An apparatus for sealing food containers using a sealing film, the apparatus comprising:

a base comprising a front panel, a rear panel, and two opposing substantially vertical side panels extending between the front panel and the rear panel;

a container holder for holding a food container, the container holder is configured to be moved relative to the base between a loading position and a sealing position, the container holder having a pair of side edges;

a heater platen positioned within the base;

a pair of guides extending vertically from opposite sides of the heater platen;

a handle movably attached to the base to move between a loading position and a sealing position; and

a pressure applicator positioned on a surface of the heater platen whereby as the handle is moved, the handle causes the pressure applicator to apply pressure to a central portion of the heater platen causing the heater platen to move into engagement with the sealing film to

thereby seal the sealing film to portions of the food container when the container holder is in the sealing position,

wherein the side panels of the base each having elongated opposing first grooves on inner surfaces thereof, the first grooves extending substantially horizontally and opening to a front of the base to receive the side edges of the container holder such that the container holder is horizontally slidable within the base, the side panels of the base each also having elongated opposing second grooves on inner surfaces thereof, the second grooves extending substantially vertically to receive the guides such that the guides and the heater platen are vertically movable within the base above the container holder.

6. The apparatus of claims 1-4, wherein:

the pressure applicator applies pressure to a central portion of the heater platen.

7. The apparatus of claim 6, wherein;

the pressure applicator includes at least one spring applying resilient pressure to the heater platen.

8. The apparatus of claims 1 and 5, further comprising:

a bracket mounted on the heater platen for extending over the cam;

wherein as the handle is rotated to the loading position, the cam engages the bracket to thereby lift the heater platen from the sealed food container.

9. The apparatus of claims 1 and 5, wherein:

the pressure applicator comprises a rubber pad positioned between the cam and the surface of the heater platen; and

the surface of the heater platen is an upper surface of the heater platen.

10. The apparatus of claim 9, wherein:

the pressure applicator further comprises a metal plate positioned between the cam and an upper surface of the rubber pad.

11. The apparatus of claims 1 and 5, wherein:
the handle comprises a pair of side arms each having a base end and a distal end, the handle further comprising a handle member extending between the distal ends of the side arms, the base ends of the side arms being held to the base by a pair of pins aligned on a common axis such that the handle may be rotated about the common axis.
12. The apparatus of claim 11, wherein:
the cam is positioned between the base ends of the side arms.
13. The apparatus of claim 12, wherein:
the cam is a cylinder having a central axis, and wherein the cam is mounted between the base ends of the side arms such that the central axis of the cylinder is parallel to, but not coaxial with, the common axis whereby the cylinder is rotated about the common axis as the handle is rotated.
14. The apparatus of claim 12, wherein:
the cam has an eccentric cross section.
15. The apparatus of claims 1 and 5, wherein:
the cam is made of an ultra-high molecular weight polymer.
16. The apparatus of claims 1-5, wherein:
the base is made of an ultra-high molecular weight polymer.
17. The apparatus of claim 1, wherein:
the base comprises two substantially vertical side panels, wherein the cam is mounted between the side panels.

18. The apparatus of claims 17, wherein:

the side panels each have elongated opposing grooves on inner surfaces thereof, the opposing grooves extending substantially horizontally and opening to a front of the base to receive side edges of the container holder such that the container holder is horizontally slidable within the base.

19. The apparatus of claim 18, wherein:

the opposing grooves are U-shaped with one leg of each groove opening to a front of the base to allow the container holder to be slid therein, with the container holder dropping to the other leg of each groove when the container holder is fully inserted into the base.

20. The apparatus of claim 18, further comprising:

a pair of guides extending vertically from opposite sides of the heater platen, the side panels of the base each having elongated opposing grooves on inner surfaces thereof, the opposing grooves extending substantially vertically to receive the guides such that the guides and the heater platen are vertically movable within the base above the container holder.

21. The apparatus of claim 17, further comprising:

a pair of guides extending vertically from opposite sides of the heater platen, the side panels of the base each have elongated opposing grooves on inner surfaces thereof, the opposing grooves extending substantially vertically to receive the guides such that the guides and the heater platen are vertically slidable within the base.

22. The apparatus of claims 1-5, wherein:

the heater platen comprises a metal plate and a heater blanket provided on an upper surface of the metal plate.

23. The apparatus of claims 1 and 3-5, wherein:

the container holder is further configured to hold a roll of the sealing film such that a portion of the sealing film may be unrolled and pulled over the food container when the container holder is in the loading position.

24. The apparatus of claims 1-4, wherein:

the container holder comprises a metal sheet having top and bottom surfaces and at least one opening through the metal sheet circumscribed by an inner edge extending between the top and bottom surfaces, the container holder further comprising a resilient gasket having a thickness greater than that of the metal sheet and having a groove formed therein for receiving the inner edge so as to contact both the top and bottom surfaces of the metal sheet and to line the opening to provide a upper support surface above the top surface of the metal sheet upon which portions of the food container are supported, the supported portions of the food container corresponding to locations where the sealing film is to be sealed to the food container.

25. The apparatus of claims 1-5, wherein:

the container holder comprises a sheet having top and bottom surfaces and at least one opening through the sheet.

26. The apparatus of claims 25, wherein:

the container holder includes legs extending from the sheet to support the container holder on a surface.

27. The apparatus of claims 1-5, wherein:

the container holder includes a curved section configured to hold a roll of the sealing film such that a portion of the sealing film may be unrolled and pulled over the food container.

28. The apparatus of claim 27, wherein:
the container holder includes a hold down for holding down an end of the sealing firm, the hold down being located adjacent a step such that the end of the sealing film is flipped upward against the hold down and the step.
29. The apparatus of claims 1, 2, 4 and 5, further comprising:
a cutting blade mounted to the heater platen for cutting the sealing film when the heater platen engages the sealing film.
30. The apparatus of claims 1, 2, 4 and 5, further comprising:
a cutting blade mounted to the container holder for cutting the sealing film.
31. The apparatus of claim 30, wherein:
the cutting blade is slidable in two directions along the container holder and configured to cut the sealing film as the cutting blade is slid in each direction.
32. The apparatus of claim 3, wherein:
the cutting blade is slidable in two directions along the container holder and configured to cut the sealing film as the cutting blade is slid in each direction.
33. The apparatus of claim 5, wherein;
the pressure applicator includes at least one spring applying resilient pressure to the heater platen.
34. The apparatus of claim 2, further comprising:
a handle attached to the base to move between a loading position and a sealing position, wherein, as the handle is moved, the handle causes the pressure applicator to apply pressure to the heater platen.

35. The apparatus of claim 34, wherein:
the handle includes a cam within the base; and
the pressure applicator is positioned between a portion of the cam and a surface of the heater platen whereby, as the handle is rotated, the cam rotates and presses against the pressure applicator, which, in turn, applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container when the container holder is in the sealing position.

36. The apparatus of claim 3, further comprising:
a handle attached to the base to move between a loading position and a sealing position, wherein, as the handle is moved, the handle causes the pressure applicator to apply pressure to the heater platen.

37. The apparatus of claim 35, wherein:
the handle includes a cam within the base; and
a pressure applicator positioned between a portion of the cam and a surface of the heater platen whereby, as the handle is rotated, the cam rotates and presses against the pressure applicator, which, in turn, applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container when the container holder is in the sealing position.

38. The apparatus of claim 4, further comprising:
a handle attached to the base to move between a loading position and a sealing position, wherein, as the handle is moved, the handle causes the pressure applicator to apply pressure to the heater platen.

39. The apparatus of claim 38, wherein:
the handle includes a cam within the base; and
a pressure applicator positioned between a portion of the cam and a surface of the heater platen whereby, as the handle is rotated, the cam rotates and presses against the pressure

applicator, which, in turn, applies pressure to the heater platen causing the heater platen to move into engagement with the sealing film to thereby seal the sealing film to portions of the food container when the container holder is in the sealing position.

40. The apparatus of claims 35, 37 and 39, further comprising:

a bracket mounted on the heater platen for extending over the cam;

wherein as the handle is rotated to the loading position, the cam engages the bracket to thereby lift the heater platen from the sealed food container.

41. The apparatus of claims 35, 37 and 39, wherein:

the cam is a cylinder having a central axis, and wherein the cam is mounted between the base ends of the side arms such that the central axis of the cylinder is parallel to, but not coaxial with, the common axis whereby the cylinder is rotated about the common axis as the handle is rotated.

42. The apparatus of claim 35, 37 and 39, wherein:

the cam has an eccentric cross section.

43. The apparatus of claim 4, wherein:

the resilient member is at least one spring.

44. A container holder for an apparatus for sealing food containers using a sealing film, the container holder comprising:

a plate having at least one opening therethrough, the plate being configured to support a food container thereon whereby pockets in the food container are accepted within the at least one opening;

legs extending downwardly from the plate for supporting the plate above a surface;

film holder associated with the plate a to hold a roll of the sealing film such that a portion of the sealing film may be unrolled and pulled over the food container placed on the plate; and

a cutting device connected to the plate for cutting the sealing film.

45. The apparatus of claim 44, wherein:

the cutting device is slidable in two directions and configured to cut the sealing film as the cutting blade is slid in each direction.

46. The apparatus of claim 44, further including:

a hold down for holding down an end of the sealing film, the hold down being located adjacent a step such that the end of the sealing film is flipped upward against the hold down and the step.